THE COUNCIL FOR TOBACCO RESEARCH–U.S.A., INC.

110 EAST 59TH STREET
NEW YORK, N. Y. 10022
(212) 421-8885

Application For Renewal of Research Grant

(Use extra pages as needed)

First Renewal ☒ Second Renewal ☐ Date: 1-8-73

1. Principal Investigator (give title and degrees):

Wayne L. Ryan, Ph.D. - Professor of Biochemistry

2. Institution & address:

University of Nebraska College of Medicine
42nd and Dewey Avenue
Omaha, Nebraska 68105

3. Department(s) where research will be done or collaboration provided:

Department of Biochemistry

4. Short title of study:

The 3',5' Cyclic Monophosphate System in Carcinogenesis

5. Proposed renewal date: July 1, 1973

6. How results to date have changed earlier specific research aims:

The transport of cyclic AMP is going to be investigated in addition to the previously stated specific aims.

7. How results to date have changed earlier working hypothesis:

The level of cyclic AMP is not lower in tumor cells than in normal cells. If anything, our results indicate that cyclic AMP may be higher in tumor cells. However, for each cell there is a normal level of cyclic AMP, and a decrease from that level is accompanied by an increase in cell division; an increase in the level of cyclic AMP is accompanied by a decrease in cell division.

One alteration in the cyclic AMP system not considered previously is transcellular transport. Our studies indicate that either viral or chemical carcinogenesis results

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7. (continued)

in a cell that does not effectively transport cyclic AMP. This may represent the loss of an important control mechanism because the tumor cell would not receive the same cyclic AMP signals from adjoining cells to cease division, and it would receive inadequate cyclic AMP to maintain a differentiated state. This hypothesis would be consistent with the changes found in membrane structure in the normal and malignant cell.

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8. Any additional facilities now required? Describe briefly:

None

9. Any changes in personnel? Append biographical sketches of new key professional personnel:

None

10. Append outline of experimental protocol for ensuing year.

11. List publications or papers in press resulting from this or closely related work. (append reprints or manuscripts not previously sent).

1. Ryan, W. L. & McClurg, J. E., Tissue Levels of Cyclic AMP and Tumor Inhibition, Conf. on Cyclic AMP and Immune Responses, Marco Island, Florida, Jan. 7-10, 1973 (in press).
2. Ryan, W. L. and Curtis, G. L., Chemical Carcinogenesis and Cyclic AMP, The Fifth Annual Miami Winter Symposia, Miami, Florida, Jan. 15-19, 1973, Academic Press (in press).
3. Ryan, W. L., Cancer and Cyclic Nucleotides, for Volume 4 of Advances in Cylic Nucleotide Research, Raven Press, 1973 (in preparation).

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12. Summary progress report (append in standard form as separate document, unless recently submitted).

Source: https://www.industrydocuments.ucsf.edu/docs/y2yl0000

Outline of Goals for Next Year:

1. Compare the transport of cyclic AMP by each of the cell lines and their percent inhibition by each.
2. Compare the activation of adenylate cyclase in the normal and carcinogen-treated cell lines.
3. Compare the phosphodiesterases of each of the cell lines.
4. Compare the protein kinase-binding protein of each of the cell lines.

The experimental methodology is described in our initial report.

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Source: https://www.industrydocuments.ucsf.edu/docs/yzbb0000

13. Budget for the coming year:

A. Salaries (give names or state "to be recruited")	% time	Amount
Professional (give % time of investigator(s) even if no salary requested)		
Margaret L. Heidrick, Ph.D. Instructor	100%	13,922
Technical		
TBA, Dishwasher	100%	4,741
TBA, Secretary	25%	1,524
Neal A. Short, Technician	100%	8,466
	Sub-Total for A	$ 28,653

B. Consumable supplies (by major categories)

Protein Kinase Assays $6.00/assay (400 assays)--	$ 2,400
Cyclic AMP $7.50/assay (400 assays)----------	3,000
Phosphodiesterase $2.00/assay (400 assays)------	800
Tissue Culture Supplies----------	11,000
Miscellaneous Supplies----------	1,500
Sub-Total for B	$ 18,700

C. Other expenses (itemize)

Travel	$ 500
Publication Costs	$200
Sub-Total for C	700
Running Total of A + B + C	$ 48,053

D. Permanent equipment (itemize)

Sub-Total for D	
E	7,208
Total request	$55,261

E. Indirect costs (15% of A+B+C)

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Source: https://www.industrydocuments.ucsf.edu/docs/yzyl0000

14. Other sources of financial support:

List financial support from all sources, including own institution, for this and related research projects.

CURRENTLY ACTIVE

Title of Project	Source (give grant numbers)	Amount	Inclusive Dates
Glycine in Asparaginase Inhibition of Lymphosarcoma	National Inst. of Health #CA12110-02	$ 26,994	4/1/72-3/31/73
Assay System for Predicting the Effectiveness of Asparaginase	John A. Hartford Foundation	$ 25,818	12/1/72-11/30/73
Regulation of Cell Division by Cyclic AMP	American Cancer Society # BC-48A	$ 30,774	1/1/73-12/31/73

PENDING OR PLANNED

Title of Project	Source (give grant numbers)	Amount	Inclusive Dates

It is understood that the investigator and institutional officers in applying for a grant have read and accept the Council's "Statement of Policy Containing Conditions and Terms Under Which Project Grants Are Made."

Principal investigator

Typed Name Wayne L. Ryan, Ph.D.

Signature Wayne L. Ryan Date 1-9-73

Telephone 402 - 541-4445
Area Code Number Extension

Checks payable to

University of Nebraska Medical Center

Mailing address for check:

Director of Finance, Univ. of Nebr. Med. Center

42nd & Dewey Ave., Omaha, Nebr. 68105

Responsible officer of institution

Typed Name Robert D. Sparks, M.D.

Title Chancellor, Univ. Nebr. Med. Center

Signature [signature] Date 1/14/73

Telephone 402 541-4200
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